

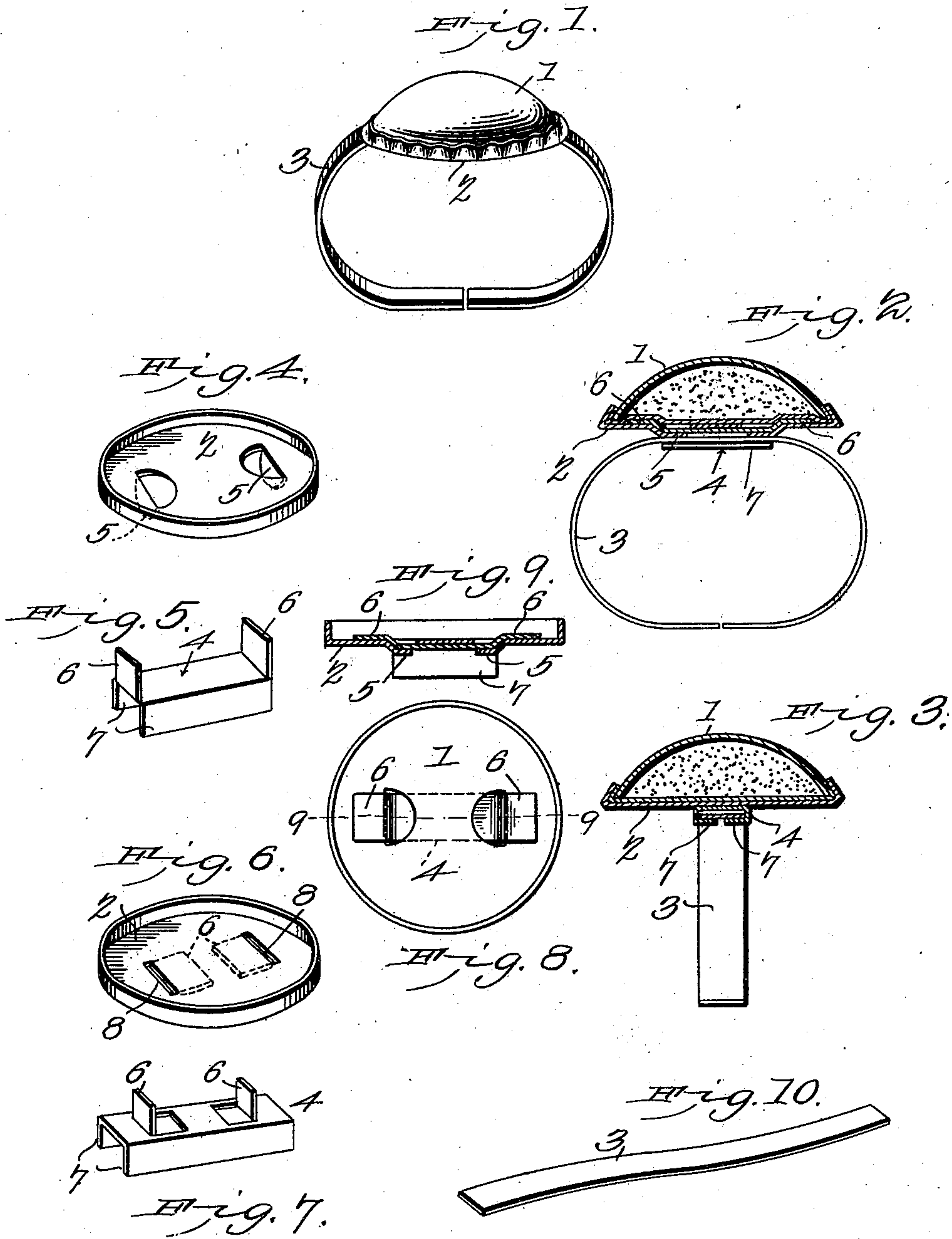
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Patented Sept. 30, 1902.

E. S. LAFFERTY.
RAILROAD TORPEDO.

(Application filed May 5, 1902.)

(No. Model.)



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UNITED STATES PATENT OFFICE.

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RAILROAD-TORPEDO.

SPECIFICATION forming part of Letters Patent No. 710,362, dated September 30, 1902.

Application filed May 5, 1902. Serial No. 106,054. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS S. LAFFERTY, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Railroad-Torpedo, of which the following is a specification.

This invention relates to railroad-torpedoes.

10 The object of the invention is in a ready, simple, cheap, and thoroughly practical manner to effect connection of the clasp or holding-strap with the bottom of the torpedo-shell and to effect the assemblage without the employment of rivets, solder, or other supplemental attaching means.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the 20 construction and combination of parts of a railroad-torpedo, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like 25 numerals of reference indicate corresponding parts, there are illustrated three forms of embodiment of the invention, each capable of carrying the same into practical operation, it being understood that the elements therein 30 exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof, and in these drawings—

Figure 1 is a view in perspective of a complete torpedo embodying one form of the present invention. Fig. 2 is a view in side elevation, the torpedo-shell being in section. Fig. 3 is a view in section, taken at right angles to that shown in Fig. 2. Fig. 4 is a perspective detail view of one form of torpedo-shell bottom. Fig. 5 is a perspective view of one form of clip. Fig. 6 is a perspective view of another form of bottom. Fig. 7 is a perspective view of another form of clip. Fig. 8 is a view in plan of the bottom shown in Fig. 4, with the form of clip shown in Fig. 5 associated therewith. Fig. 9 is a view in transverse section, taken on the line 9-9, Fig. 8. Fig. 10 is a perspective detail view of a modified form of clasp that may be employed in 50 lieu of that shown in Figs. 1 and 2.

Referring to the drawings, 1 designates the top of the torpedo-shell; 2, the bottom thereof; 3, the clasp or holding-strap for securing the structure upon a railway-rail, and 4 the 55 clip for holding the clasp assembled with the bottom of the shell. The shell as a whole may be either circular, as shown, or oblong, and as the particular contour of the shell is immaterial and has nothing to do with the 60 present invention further description is deemed unnecessary.

The present invention resides in the construction of the bottom of the torpedo-shell, in the clip for assembling the clasp therewith, 65 and in the clasp. In the form of bottom shown in Fig. 4 there are provided two downward-projecting ears formed by separating two semicircular sections of the bottom, this arrangement being embodied in the forms of 70 the invention illustrated in Figs. 2, 8, and 9. It is to be understood, however, that instead of having the ears semicircular in form, as shown, they may be rectangular, triangular, or otherwise shaped, and as such constructions will be readily apparent and will be 75 within the scope of the invention detailed illustration thereof is considered unnecessary.

With the bottom shown in Fig. 4 will be associated the clip shown in Fig. 5, which 80 comprises two upward-extending terminal tongues 6 and two downward-extending side members or flanges 7, disposed parallel with each other and adapted to be clamped around the clasp, as clearly shown in Fig. 3, 85 thus to constitute clasp-engaging members. In associating the clip with the bottom the tongues 6 are passed through the openings formed by the ears 5 and are bent down upon the upper surface of the bottom, as shown 90 in Fig. 8, and the ears 5 are then bent in under the body portion of the clip, as shown in Fig. 6, thereby securely attaching the clip to the bottom. The bottom and the clip thus combined may be sold as an article of 95 manufacture to be used in connection with a top and clasp of any preferred form. It is preferred, however, to employ a clasp such as that shown in Figs. 1 and 2, which comprises a length of steel spring-tempered in 100 form corresponding approximately to the tread of the rail and is secured to the bottom

of the shell by the flanges 7, which are bent or clenched in around the spring, as shown in Figs. 2 and 3. This form of resilient clasp will be found highly efficient in use, inas-
 5 much as it may be positioned upon a rail with rapidity and ease, and by reason of its shape will positively hold the torpedo thereon until exploded. If preferred, however, a strip of
 10 non-resilient material may be employed as a clasp, preferably a strip of lead, as illustrated in Fig. 10, and when this form of clasp is employed it will be associated with the shell-bottom in the same manner as that above described.

15 In the form of shell-bottom shown in Fig. 6 the ears 5 are dispensed with, and instead of the semicircular openings two alined slots 8 are employed. This form of bottom is adapted for use in connection with a clip
 20 such as that shown in Fig. 5, in which case the tongues 6 thereof may be bent inward toward the center of the bottom or outward toward its periphery, as may be preferred. In lieu of the form of clip shown in Fig. 5
 25 the form shown in Fig. 7 may be employed in connection with the shell-bottom shown in Fig. 6, the only difference in the construction of the latter clip being that instead of having the tongues 6 disposed at the termi-
 30 nals of the body portion of the clip they are disposed intermediate of the ends thereof and are formed by separating two lengths of metal from the body of the clip and bending them at right angles to their normal position,
 35 as clearly shown.

It will be obvious that the exact shape of the tongues may be varied—as, for instance, by having them triangular in shape or by rounding their free ends to correspond with
 40 the ears 5—and as this will be readily understood and will be within the scope of the invention detailed illustration thereof is omitted.

It will be seen from the foregoing description that although the device of this invention is exceedingly simple of construction 45 it will be found thoroughly efficient and durable in use and that it will in a positive and certain manner perform the functions for which it is designed.

Having thus fully described my invention, 50 what I claim as new, and desire to secure by Letters Patent, is—

1. A railroad-torpedo having its bottom provided with orifices, in combination with a clip having tongues to project through the 55 orifices and to be bent against the bottom.

2. A railroad-torpedo having its bottom provided with orifices, in combination with a clip provided with tongues to project through the orifices and to be bent against the bottom 60 and with flanges projecting beyond the bottom, and a clasp associated with the bottom by the flanges.

3. A railroad-torpedo having its bottom provided with downward-projecting ears, in 65 combination with a clasp-engaging clip having tongues to project through the bottom, the ears being adapted to be bent around the clip.

4. A railroad-torpedo having its bottom provided with orifices, in combination with a 70 clip provided with tongues to project through the orifices and to be bent against the bottom and with depending flanges, and a resilient clasp associated with the bottom by the flanges and being of a form closely to em- 75 brace the tread of the rail.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ERASTUS S. LAFFERTY.

Witnesses:

GEO. A. BROOKS,
 E. CORSEPIUS.